DOCUMENT RESUME

ED 258 346 EA 017 843

AUTHOR Smith, Jana Kay; Smith, Nick L.
TITLE An Investigation of Program Evaluation Budgets. Paper and Report Series No. 108. Interim Draft.
INSTITUTION Northwest Regional Educational Lab., Portland, OR. Research on Evaluation Program.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Mar 85
CONTRACT 400-80-0105
NOTE 35p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Budgeting; Cost Effectiveness; *Educational Assessment; Elementary Secondary Education; *Evaluators; Expenditures; Formative Evaluation; Operating Expenses; Program Evaluation; *Resource Allocation; *State Departments of Education; Summative Evaluation

ABSTRACT

Data from two studies on evaluation budgeting practices are presented. In the first study, estimated budget figures are provided for formative and summative evaluations by 29 state education agency evaluators. In the second study, initial budget figures, final costs, and study characteristics are abstracted from the records of 85 evaluations conducted under the aegis of a regional evaluation contracting firm. A pattern of budget allocations in the two studies was observed in which roughly 61 percent of the total evaluation budget was allocated to personnel, 13 to 14 percent to overhead, and all other budget categories were comprised of 10 percent or less of the total budget. These allocation patterns were found to vary according to certain study characteristics, however. Allocation to personnel was related to the size of the total budget, the use of a pre-post design, and the number of pages in the written report. Allocation to the travel budget category was related to the size of the total budget, the distances traveled, the conduct of a formative evaluation, the provision of evaluation-related services such as training, and the use of archival data or a mixed design. Data processing allocations were also related to funding level and the conduct of a summative evaluation. The total cost of the evaluation was associated with travel requirements, the use of a pre-post design, the provision of services, and content. The conclusion points to pitfalls in evaluation budgeting practice and provides recommendations for future studies. (Author/TE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

X The document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

EA 017 843

Interim Draft

Do not cite or quote without authors' permission.

Authors welcome reactions and suggestions.

No. 108 AN INVESTIGATION OF PROGRAM EVALUATION BUDGETS

JANA KAY SMITH
NICK L. SMITH

March 1985

Nick L. Smith, Director
Research on Evaluation Program
Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue, Portland, Oregon 97204

Published by the Northwest Regional Educational Laboratory, a private nonprofit corporation. The work upon which this publication is based was performed pursuant to Contract No. 400-80-0105 of the National Institute of Education. It does not, however, necessarily reflect the views of that agency.

The information presented in this publication does not necessarily reflect the opinions of the Northwest Regional Educational Laboratory and no endorsement should be inferred.

PREFACE

The Research on Evaluation Program is a Northwest Regional Educational Laboratory project of research, development, testing, and training designed to create new evaluation methodologies for use in education. This document is one of a series of papers and reports produced by program staff, visiting scholars, adjunct scholars, and project collaborators--all members of a cooperative network of colleagues working on the development of new methodologies.

How are evaluation resources allocated across such standard budget categories as personnel, travel, and data processing? Do these allocations differ significantly based on a study's funding level or the type of design used? These and related questions are answered in this document which reports on two studies of evaluation budgeting. The first study looks at projected budget allocation patterns for formative and summative evaluations as reported by evaluators in state education agency evaluation units. The second study provides a detailed analysis of 85 actual evaluation budgets of a regional evaluation contracting firm.

Nick L. Smith, Editor
Paper and Report Series

CONTENTS

	Page
ABSTRACT	1
STUDY DESCRIPTION	2
STUDIES OF EVALUATION BUDGETING	4
Study 1: SEA Evaluators' Budget Estimates	4
Study 2: Evaluation Project Budget Reviews	6
RESULTS AND DISCUSSION	7
Evaluation Budget Allocation Patterns	7
Variations in Evaluation Budget Allocation Patterns	11
Factors Affecting Allocations to Evaluation Budget Categories	12
Funding Level	12
Purpose of the Evaluation	14
Location of Clients	17
Provision of Evaluation-Related Services	18
Design of the Evaluation	19
Content of the Program	20
CONCLUSION	21
REFERENCES	24
APPENDICES	
A: Cost Record Abstracting Form for Evaluation Contracting Firm Budgets	27
B: Report Abstracting Form for Evaluation Contracting Firm Budgets	29
C: SEA Evaluation Activity Checklist	31

ABSTRACT

Data from two studies on evaluation budgeting practices are presented. In the first study, estimated budget figures are provided for formative and summative evaluations by 29 SEA evaluators. In the second study, initial budget figures, final costs, and study characteristics are abstracted from the records of 85 evaluations conducted under the aegis of a regional evaluation contracting firm. A pattern of budget allocations in the two studies was observed in which approximately 61 percent of the total evaluation budget was allocated to personnel, overhead added an additional 13 to 14 percent to the cost of the evaluation, and all other budget categories were comprised of 10 percent or less of the total budget. Those allocation patterns were found to vary according to certain study characteristics, however. Allocation to personnel was related to the size of the total budget, the use of a pre-post design, and the number of pages in the written report. In addition, while evaluators in both studies estimated that personnel would require more money if a formative evaluation were conducted, the actual cost for personnel was 9 percent less than projected. Allocation to the travel budget category was related to the size of the total budget, the distances traveled, the conduct of a formative evaluation, the provision of evaluated-related services such as training, and the use of archival data or a mixed design. Data processing allocations were also related to funding level and the conduct of a summative evaluation. The total cost of the evaluation was associated with travel requirements, the use of a pre-post design, the provision of evaluation related services, and the content of the evaluation. The conclusion points to pitfalls in evaluation budgeting practice and provides recommendations for future studies.

STUDY DESCRIPTION

Most evaluators, trained as researchers rather than managers, receive little formal instruction in how to plan and manage evaluation budgets. Rather, skill in handling evaluation budgets must be acquired on the job where lack of proper monitoring, use of "ball park" accounting systems, mistakes of underestimating and overestimating costs, and failure to adjust the evaluation work in light of changing financial resources, can be costly and result in poor, inadequate evaluation studies. As in all areas of social service delivery and research, evaluation resources are dwindling, making the need to plan properly and manage evaluation budgets even more acute.

Although budgeting is necessary for almost all varieties of evaluation practice, there has been little study of it. Alkin and Stecher (1983), in reviewing the sparse writing on the subject, note that almost no empirical studies have been done on the proper allocation of evaluation resources across budget categories. Although evaluators are urged in the literature to conduct evaluations as economically as possible, ". . . nowhere is it indicated what dollar amounts or percentages should be spent for evaluation, nor are any guidelines offered for making cost allocations within the evaluation budget" (Alkin and Stecher, 1983, p. 119).

This observation of a lack of guidance for evaluation budgeting was again confirmed in 1985, when our search of the Social Science Citation Index and ERIC for 1984 turned up no articles on budgeting for evaluation projects. Consequently, we

agree that the Alkin and Stecher study ". . . may well represent the first comprehensive examination of evaluation costs at the microlevel" (Alkin and Stecher, 1983, p. 121). We have therefore used their study as a starting point for our work.

The purpose of the Alkin-Stecher (1983) study was to identify typical budget allocation patterns for evaluation and to determine the effect of the purpose of the evaluation (formative versus summative) and the funding level on budget allocation patterns. Their method was to survey 25 evaluators from a wide range of backgrounds and affiliations to obtain estimates of allocations for 7 budget categories for a process and a summative evaluation and for funding levels of $4,000, $10,000, and $25,000.

The Alkin-Stecher study was a useful exploratory investigation and provided a good start on the understanding of budgeting processes for evaluations. However, there were several shortcomings in the study which we believed reduced the credibility of their findings. For instance, Alkin and Stecher (1983) freely admitted the informal nature of their study, labeling their respondents a ". . . nonrandom but diverse sample" (p. 123), and indicated that they ". . . rejected the formalism of rigidly structured questionnaires and carefully controlled sampling in favor of semi-structured collegial conversations with a diverse group of evaluation professionals" (Alkin and Stecher, 1983, p. 124).

After looking carefully at the Alkin and Stecher (1983) study, we conducted two concurrent studies on budgeting procedures for evaluations. These studies were designed as a more formal attempt to study and expand the base of understanding of budgeting for evaluations. In our first study, we used a mail survey to collect budget allocation estimates for formative and summative evaluations from a group of evaluators employed in state education agency (SEA) evaluation units. This budget information was collected as part of a larger research study (cf. Smith and Smith, in press). In our second study, we examined 85 actual budgets and final reports completed by evaluators employed in a private, nonprofit evaluation contracting firm.

In presenting the results of these two studies, we provide a profile of how funds are allocated in evaluation budgets and discuss the effect of various factors on budget allocation patterns and total evaluation costs. We believe that this systematic study of evaluation budgeting procedures and the identification of pitfalls in the practice of budgeting for evaluations will be useful for evaluators learning how to budget studies, for clients writing evaluation contracts, and for grant review panels judging the feasibility of proposed evaluations. A brief overview of the purpose and design of our two studies follows.

STUDIES OF EVALUATION BUDGETING

Study 1: SEA Evaluators' Budget Estimates

The purpose of Study 1 was (1) to obtain a picture of budget allocations for evaluation, (2) to determine whether budget allocations differed for formative versus summative evaluation designs, and (3) to document method differences in formative versus summative evaluations.

In 1983 a survey was mailed to all 37 SEAs with centralized program evaluation units. After the initial mailing and three follow-up mailings, 29 (78 percent) completed surveys were returned. The participating evaluators represented evaluation units that conducted an average of 8 evaluations a year and had an average 7 full-time professional staff. (See Smith and Smith, in press) for a detailed description of the study design and sample.)

The survey provided scenarios of formative and summative evaluations, and asked questions about evaluation activities and budgeting for both. The scenario provided for the formative study was as follows:

> Assume that your evaluation unit has been asked to evaluate a minority education project in a nearby metropolitan city in your state. The project is designed to improve student self-image and school performance, and

to increase the community acceptance of minority students. In this first year of the project, your unit is to conduct a formative evaluation to provide feedback for program improvement to the local school district. You have $10,000 total to spend on all expenses of the evaluation study. We would like to know what major evaluation activities you would include in your study (question 1) and how you would allocate the evaluation resources (question 2).

First, respondents were provided with a list of 18 activities generic to any type of evaluation and asked to check each that would be a major part of a formative evaluation study with a budget of $10,000. Second respondents were asked to allocate the $10,000 designated for the formative evaluation to the budget categories. Respondents were then provided a second scenario explaining that the same program was now in its third year of operation and a summative evaluation has been requested. Again, the budget for a summative study was $10,000, the same as for the formative study. Information on evaluation activities budget allocations was again requested.

Our budget categories were selected to be comparable to the categories used in both our Study 2 investigation of actual projects (described in the next section) and in the Alkin and Stecher (1983) study. The budget categories were:

Personnel costs	(professional and support staff salaries and benefits)
Consultant costs	(consultant salaries and benefits)
Staff travel	
Consultant travel	
Communication	(telephone, postage, shipping)
Facilities	(facilities and utilities)
Duplication	(printing and duplication)
Data processing	
Supplies	(materials, supplies, equipment)
Other services	(e.g., subcontracts, conferences; please specify)

In a final question, respondents were asked what indirect or overhead rate their agency would normally add to the cost of these evaluations.

Study 2: Evaluation Project Budget Reviews

The purpose of this study was (1) to describe budget allocation patterns in actual evaluation studies, (2) to explore the relationship between the cost of specific resources and study characteristics, and (3) to identify pitfalls in evaluation budgeting by comparing initial budget figures with final evaluation costs.

Budgets from 85 completed evaluations conducted by evaluators employed in a private, nonprofit evaluation contracting firm were made available to us. In many evaluation settings, evaluation budgets are not constructed on a project-by-project basis. Rather, one agency or unit budget covers the cost of all projects conducted in a fiscal year. In fact, this is the most common practice for evaluation units in state departments and local districts. Consequently, we were fortunate to locate a source of available and completed budgets where each evaluation served a different client and had its own budget.

All evaluation studies conducted from 1980 to 1982 (n=85) by evaluators in this firm were obtained and abstracted. Most of the evaluations were conducted by two evaluators (87%; n=74). We were given permission to abstract from initially proposed budgets, final project expenditure records, and written reports. Consequently, for each evaluation, information was obtained on (a) the budget as originally estimated, (b) the final budget expenditures, and (c) certain characteristics of the study. The budget categories used by this agency and for this study were:

Personnel	(including professional and support staff salaries and benefits)
Consultant costs	
Staff travel	
Consultant travel	
Postage and shipping	
Telephone	
Facilities	
Utilities	
Printing	
Duplication	
Data processing	

Information was obtained on both the initial budget and final evaluation costs. A copy of the budget abstracting form is located in Appendix A. The budget of an average evaluation was $5,740 (the range was $0 to $48,499), while the final cost of an average evaluation was $5,602 (the range was $192 to $51,040). In most of the cases, anticipated budget costs were comparable to actual expenditures. Consequently, in this report we will compare the budgeted costs of the evaluation with the estimated budget costs generated by the SEA evaluator with the respondents in the Alkin-Stecher (1983) study. If an initial budgeted cost differed notably from the contracting firm's final cost, a discussion on the reasons for this discrepancy is provided.

The study characteristics obtained from the evaluation written reports included the purpose of the evaluation (e.g., formative versus summative), the location (e.g., state) and type of client (e.g., state or local education agency), whether evaluation related services (e.g., staff training) were provided, the design of the study (pre-post, mixed, etc.), and the content of the evaluation (e.g., Chapter 1 program). The report abstracting form and coding key is located in Appendix B.

RESULTS AND DISCUSSION

Evaluation Budget Allocation Patterns

Prior to comparing the percent allocation figures obtained in the two studies, the data had to be transformed due to differential treatment of overhead costs in the two studies. Indirect or overhead rates were assessed as a cost over the fixed budget in the SEA study, and as a part of the total budget in the contracting firm budgets. In order to make the budget category percent figures comparable across the two studies, percentages for the contracting firm budgets were calculated based on total cost minus the overhead rate. Treatment of overhead cost in this way also made the percent figures for our two studies comparable

to those in the Alkin-Stecher (1983) study. Percent figures for each budget category was then based on a total budget which did not include overhead rate.

Table 1 provides a comparison of the average percent by budget category for the two studies. The breakdown for mean percent budget allocations is not particularly surprising. In fact, in terms of overall patterns, the data from the two studies are fairly consistent. The allocations to personnel and to overhead represented the highest costs while all other categories received 10 percent or less of the available monies.

Personnel. Evaluators in both our studies allocated 61 percent of the budget to personnel. Similarly, in a study of evaluations conducted for educational extension Paisley et al. (1978) found 63 percent of the budget allocated to personnel. Similar allocations have been observed in local budgets (Hartman, Rivenburg, and Moore, 1984). These percentages differ, however, from the 86 percent of the budget allocated to staff (professional and support) by the Alkin and Stecher (1983) respondents.

A closer look at budget categories studied may explain the differences of 61 percent versus 86 percent allocations to personnel. Indirect cost, which increased the total cost of the evaluation by 13 percent to 14 percent in our two studies was not assessed in the Alkin-Stecher (1983) study. It seems plausible that the respondents in the Alkin-Stecher (1983) study, who were not provided with a category for indirect costs in their budgets, may have increased their allocations to personnel to include indirect costs as well.

Travel. There was a difference between the studies in their travel allocations with an overall average of 17 percent of the budget devoted to travel by the contracting firm budgets as compared to 7 percent by SEA evaluators. This difference was not surprising, however, when it is observed that 80 percent of the evaluations conducted by the contracting firm evaluators were out-of-state contracts. When instate travel costs were figured,

the travel allocation by the contracting firm was 6 percent. Alkin and Stecher (1983) respondents allocated an average of only 3 percent of their budget to travel.

Table 1

Mean Percent Budget Allocations for Evaluations*

Budget Category	Study	
	SEA Estimates (n=29)	Contracting Firm Projects (n=85)
Personnel (professional and support - salary and benefits)	61%	61%
Staff travel	7%	17%
Consultants	6%	-0-
Materials, supplies, telephone	10%**	6%***
Data Processing	6%	-0-
Other	10%	14%
	100%	98%****
Overhead added to cost of evaluation	13%	14%

*The categories of "consultant travel" and "facilities" were dropped due to small percentages.

**This is a composite category obtained by combining the "postage and shipping," "telephone," "printing," and "duplication" categories.

***This is a composite category obtained by combining the "communication," "duplication," and "supplies," categories.

****Percent does not add up to 100 due to dropped categories.

Consultants. The contracting firm budgets did not allocate any funds to consultants because they themselves were consultants and, as a rule, did not subcontract to other consultants. The SEA evaluators, however, might be more inclined to contract with consultants for evaluation services, thus explaining their

consultant allocation of 6 percent of the total budget. Alkin and Stecher's (1983) respondents allocated only 2 percent of their budgets to consultants.

Data analysis. Data processing was not allocated any funding by the contracting firm evaluators. When queried about this, they reported that they used calculators and secretarial staff for data analysis. This approach to data analysis has since been changed and their current budgets routinely include allocations for data processing. The data processing category was allocated 6 percent of the budget by the SEA survey respondents and 3 percent of by the evaluators in the Alkin-Stecher (1983) study.

Other. The other category was optional for SEA evaluators and they used it to identify other evaluation costs such as equipment purchase or staff training. An average of 10 percent of the budget was allocated to this category by SEA evaluators. The contracting firm used the other category to cover unanticipated costs. On the average, 14 percent of the total budget was allocated to this category by the contracting firm.

Overhead. Although overhead was treated as a cost in addition to the evaluation budget and therefore was not included in the budget percentages discussed above, it is an inevitable and important cost that deserves attention. The contracting firm routinely added 14 percent to the cost of an evaluation to cover overhead costs. Similarly, when the SEA evaluators were asked what indirect or overhead rate would normally be added to the cost of an evaluation, they reported 13 percent as an average overhead rate.

This summary of evaluation budget averages can be useful as a global guide for evaluation budgeting. Alone, however, it provides little specific direction to the novice estimating a budget for the first time or to others needing information about factors that may alter "average" budget allocation patterns. The next section provides more detail about a number of factors that may affect or change allocation patterns in an evaluation budget.

Variations in Evaluation Budget Allocation Patterns

While the mean percent allocations provide an interesting picture of typical allocation patterns, a look at the variation in the percent allocations within each category shows that this picture is likely to fluctuate. Table 2 shows ranges of budget allocations assigned by the SEA evaluators.

Table 2

Range of Budget Allocations for Evaluations Assigned by SEA Evaluators

Budget Category	Range
Personnel	30% to 88%
Staff travel	0% to 20%
Consultants	0% to 35%
Materials, supplies, telephone	0% to 50%
Data processing	0% to 20%
Other	0% to 20%

The point of Table 2 is that there is substantial variation that can occur in the estimates provided by the evaluators on budget category allocations. Alkin and Stecher (1983) found similar variations in allocation patterns with ranges of allocations of up to 40 percent for professional staff salaries and up to 30 percent for all other categories. The next section looks at several study characteristics and activities that may contribute to the differing budget category estimates provided by evaluators.

Factors Affecting Allocations to Evaluation Budget Categories

We have looked at average allocation patterns for an evaluation study. However, a reliance on average figures as a guide for evaluation budgeting may be misleading, since an examination of the variation of these allocations suggests that some evaluation characteristics or activities may affect the proportional allocation to a particular budget category. In this section, we identify factors related to budget allocation patterns and discuss their effects. We found six such factors, which were:

Funding level (e.g., $5,000 or $15,000)
Purpose of the evaluation (e.g., formative or summative)
Location of the client (e.g., travel distance)
Whether an evaluation related service was provided (e.g., training)
The design of the study (e.g., pre-post or survey)
The content of the evaluation (e.g., Chapter 1 program)

Funding Level

Alkin and Stecher (1983) found that funding level had an effect on allocations to clerical/secretarial staff salary, travel, and data processing. Consequently, we were interested in seeing how funding level affected allocation patterns in the 85 evaluation budgets. Data from the SEA survey on this effect was not available, since the evaluation budgets provided in the two scenarios were fixed at $10,000.

In order to look at the effects of funding level on budget allocations, the evaluation budgets, which ranged in size from 0 to $48,499, had to be grouped into funding level categories. Three budget categories were formed by grouping budgets according to the following budget sizes: less than $5,000, $5,000-$15,000, and more than $15,000. Most of the evaluations had budgets of less than $5,000 (76 percent; n=65), with 17.6 percent (n=15) of the projects having budgets between $5,000 and $15,000, and only

5.9 percent of the evaluations having budgets greater than $15,000. These categories were selected based on the distribution of available evaluation budgets and to be comparable to the $4,000, $10,000 and $25,000 categories used in the Alkin-Stecher (1983) study.

Personnel. An interesting relationship was noted between funding level and allocation to the personnel category. There was a distinct difference between the amount of money allocated to personnel (professional and support) for low-cost projects versus mid-cost and high-cost projects. Up to 13 percent more money was allocated to personnel for evaluations with budgets less than $5,000 than was allocated to evaluations with budgets over $5,000.

While Alkin and Stecher (1983) did not observe a relationship between funding and allocation to professional staff, they did find a linear relationship betwen funding level and allocation to clerical/secretarial staff with a 5 percent allocation for a $4,000 study, a 10 percent allocation for a $10,000 and a 20 percent allocation for a $25,000 study. Their respondents reported that for low budget projects the professional staff conducted fewer activities that required secretarial assistance.

Such an explanation may also hold for our data, since the higher salaries for professional staff may be reflected in the percentage of money allocated to this category for low cost projects. For larger projects, more support staff time may be involved, but this would not elevate the personnel costs as proportionally as would a similar increase in professional staff time.

Travel. Alkin and Stecher (1983) found a linear relationship betwen funding level and travel with no money allocated to travel for a $4,000 study, 2 percent to 3 percent allocated to travel for a $10,000 study, and 5 percent to 8 percent allocated for a $25,000 study. Allocation to travel was also related to funding level in the contracting firm evaluation budgets, although in a curvilinear, rather than a linear, manner. Recall that average travel allocation for evaluations conducted by the contracting

firm was 17 percent, since 80 percent of their evaluations were conducted for out-of-state clients. However, while 13 percent of the budget was allocated for travel in a low-cost evaluation, this increased to 18 percent for a mid-cost evaluation and then back to 13 percent for a high-cost evaluation.

While the allocation of less money to travel for small budget evaluations was not surprising, the drop from 18 percent for mid-cost evaluations to 13 percent for high-cost evaluations was unexpected. One reason for the lower percentage of funds being allocated to travel for high-cost evaluations may be the proportional relationship of a relatively fixed travel cost to the variable budget sizes. That is, a high-cost travel expense would represent a high proportion of a mid-sized evaluation budget but a smaller proportion of a large evaluation budget.

Purpose of the Evaluation (formative versus summative)

Alkin and Stecher expected that "the type of evaluation . . . will affect the distribution of resources." (p. 26). Consequently, they were surprised to find few differences in budget allocations for formative versus summative evaluations. We were surprised as well, and consequently designed our two studies to enable us to better explain the presence or absence of a relationship between the purpose of the study and budget allocation patterns.

Since an expected difference in budget allocations is predicated upon the assumption that methods involved in the two study types differ, we collected data to support or disprove this assumption. Analysis of the contracting firm records showed that methods used in summative and formative evaluations differed. Summative evaluations were more likely to use a pre-post design, while a formative evaluation was more likely to use archival data and observation. This information, however, was not detailed enough to be of much assistance in explaining allocation differences for the two study types.

The SEA respondents were asked to check from a list of 18 possible evaluation activities, which would be a part of a typical formative study and which would be a part of a typical summative study. The results from this checklist are provided in Appendix C. Most evaluation activities were used in both types of studies. However, some specific differences in the methods for the two types of evaluation were evidenced.

A formative study was much more likely to employ development and piloting of instruments, use of onsite observation and interviews, and followup consultations. A summative study was more likely to include use of an evaluation advisory panel and expert reviews, control groups, and collection of posttest data. Once we had determined that there were method differences, we looked at differences in budget allocations for the two studies. We found differences in allocations to data processing, travel, and personnel according to the purpose of the evaluation.

Personnel. Intuitively, one would expect that a formative evaluation, which requires more active participation by the evaluators, might require larger amounts of money devoted to personnel costs. This expectation was borne out in the SEA study where an average of 5 percent more money was allocated to personnel for a formative study. Similarly, in the contracting firm budgets, an average of 7 percent more money was allocated to personnel for a formative evaluation.

A look at the differences between the amount of money budgeted for personnel and the final cost for personnel for the contracting firm evaluations tells a different story, however. The final personnel cost for a formative study was 9 percent less than the budgeted cost. In contrast, the final personnel cost for a summative study was 1 percent higher than its budgeted cost, and 5 percent higher than the final personnel cost for a formative study. In other words, these evaluators overestimated the time personnel would spend on a formative evaluation and underestimated slightly the time personnel would spend on a summative evaluation. In the end, the time spent on a summative

evaluation (based on salary paid) exceeded the time spent on a formative evaluation by 5 percent.

A look at the SEA activities checklist associated with a formative evaluation provided some explanation for the overestimation of personnel costs. While the formative evaluation requires more onsite work, such as observation and the conduct of interviews, the summative evaluation requires more methodologically complex activities such as use of a control group and pre-post designs. The planning and conduct of the methodologically complex activities may take more time over the course of the evaluation than the planning and conduct of the onsite activities.

Another difference between the two methods is that a formative evaluation is likely to include a followup consultation while the summative evaluation provides information to program staff and administration in a formal written report. The time it takes to write a formal report may explain why a summative evaluation requires more staff time. The mean number of pages for a formative evaluation report was 106, with a range of 26 to 276 pages, compared to a mean number of pages of 111 with a range of 0 to 574 pages for a summative report.

Travel. The amount of money allocated to travel varied according to the purpose of the evaluation. In the SEA study, an average 2 percent more money was allocated for a formative study than for a summative study; and in the contracting firm budgets, an average of 3 percent more money was allocated to travel for a formative study than for a summative study. This trend is in keeping with Alkin and Stecher's (1983) observation that 2 percent to 5 percent of the budget was allocated to travel for a summative evaluation and 8 percent to 10 percent of the evaluation was allocated to travel for a formative evaluation.

Data processing. The SEA evaluators allocated an average 3 percent more to data processing in summative studies than in formative studies. Three percent is noteworthy given that the average allocation to data processing is only 6 percent. The evaluation activities checklist completed by the SEA evaluators

provided some explanation for the increase in allocation to data processing for summative studies. Ninety-seven percent (n=28) of the SEA evaluators said that statistical analyses would be part of their summative study, while only 79 percent (n=23) included statistics in their formative study.

Location of Clients

The study of the contracting firm evaluation budgets provided information on the effect of the location of clients to budget allocations to the travel category. As mentioned previously, 80 percent of the evaluations conducted by this agency were for out-of-state clients. Specifically, the clients of the evaluations were from nine western states and Micronesia. The greatest number of evaluations were conducted for the states of Washington (n=31; 36.5%), Alaska (n=19; 24%), and Oregon (n=17; 20%).

Travel. Data from the 85 cases provided a good deal of clear information about the relationship between the location of the client and the amount of money allocated to travel. Not surprisingly, allocation to travel category was a direct function of the travel distance required. Budget allocations ranged from 6 percent for travel instate (within Oregon state) to 26 percent for out-of-state travel. Percentages allocated for travel by state were as follows:

Percentage Allocated	State(s)
6%	Oregon
12%	Washington
19-21%	Alaska, New Mexico, Arizona, Micronesia
24-26%	California, Idaho, Montana, Wyoming

The percentage of money allocated to travel was highest in rural states of Wyoming, Montana, and Idaho, where use of expensive commuter planes is usually necessary.

Total budget. The location of the client also affected the total budget of the evaluation for mid-range evaluations. Evaluations conducted in nearby or adjacent states had lower overall budgets than did evaluations in more distant states.

Provision of Evaluation-Related Services

For each report associated with a contracting firm evaluation budget, it was noted whether an evaluation-related service was provided. Such a service typically consisted of assistance in program goal definition, assistance in program implementation, training for staff in evaluation practices, etc. About half of the reports (n=41; 48.2%) documented the provision of evaluation-related services in addition to the conduct of the evaluation. We found that evaluation-related services were related to the budget in several ways.

Personnel. One would expect that the provision of evaluation-related services would increase the amount of money allocated to personnel. In fact, the opposite was found. Five percent more money was budgeted for personnel if no evaluation-related services were provided. This trend may be related to the type of study. A formative study would involve more evaluation-related services by definition because of its interactive and exploratory nature. As noted earlier, however, in the contracting firm evaluations, less money was budgeted and spent on personnel for a formative study than for a summative study. If evaluation related services are associated with formative studies, then the allocation of less money to personnel when evaluation related services are not provided is consistent with the expected pattern.

Travel. The provision of an evaluation-related service must entail travel, since an average 6 percent more money was budgeted by the contracting firm on travel if evaluation research services were provided.

Overall budget. While a higher percentage of money was budgeted and spent on personnel if evaluation-related services were not provided, the total cost of a study that involves evaluation-related services is higher than a study with no additional services. The provision of evaluation-related services elevated the total budget by an average of $2,000.

Design of the Evaluation

Within each of the 85 major evaluation projects, one or two actual evaluation studies might appear. This resulted in a total of 118 evaluation studies. Usually a report that described more than one study began with a formative evaluation and concluded with a summative evaluation.

Each evaluation design was categorized into one of seven groups: pre-post; archival data; mixed (pre-post, interviews, surveys, and/or archival data); pre-post and pilot study; development of an observation guide; pre or post only, or survey. Of these methods, mixed (n=35; 30%), archives (n=30; 25%) and pre-post (n=27; 23%) represented 78 percent of the designs.

Personnel. A pre-post design affected personnel funding allocation with between 8 percent and 11 percent more money budgeted to personnel for this design than for any other design. Actual expenditures for personnel in a pre-post design was between 2 percent and 8 percent higher than actual personnel costs for any other design. Clearly, a pre-post evaluation design required more time from the evaluator.

The conduct of an evaluation which developed an observation guide for program implementation was also associated with higher personnel costs. When an observation guide was developed, 6 percent more money was spent than was budgeted for personnel. The reason for underestimating personnel costs when writing an observation guide may be the same as the reason for underestimating personnel costs in a summative evaluation--unanticipated staff time spent writing.

Looking at the number of pages associated with the observation guide reports supports the writing-time hypothesis. An observation guide had an average of 145 pages compared to a pre-post design report which averaged 105 pages, an archival study report which averaged 108 pages, and a mixed design report which averaged only 99 pages.

Travel. Analysis of archival data and mixed design evaluations were associated with higher travel costs. Presumably because these designs would require more on-site visits, an average of 8 percent more money was budgeted and 4 percent more money was actually spent on travel costs.

Total cost. A pre-post design also affected the total cost of the evaluation. An evaluation with a pre-post analysis was budgeted for an average of about $2,000 more, and actually cost about $2,165 more, than did any other analysis. Thirty-three percent of the pre-post studies were budgeted for $5,000 or more, while only about 20 percent of the other studies were budgeted at $5,000 or more.

Content of the Program

The relationship of the topics or content of the programs being evaluated with budget allocation patterns was also explored. Of the 85 evaluation reports, 10 content categories were identified. Of these content areas, Title I (Compensatory Education, now known as Chapter 1), Title IVA (Indian Education), and Title IVC (Improvement in Local Practice) represented the majority of content areas (n=52; 60%). When compared, the allocation patterns for these three content areas were nearly identical. However, the total cost of the evaluations for these programs differed greatly.

Total cost. The total cost of the three main content areas were quite different. The mean cost of an evaluation of a Title I program (n=13) was $12,104, the mean cost of an evaluation of a Title IVA program (n=25) was $2,684, and the mean cost of an evaluation of a Title IVC program (n=13) was $4,661. One reason for this difference in total cost may be that Title I evaluations covered a longer time span or included both a formative and a summative evaluation.

CONCLUSION

Although budgeting is a critical part of every evaluation, there is very little empirical data to guide the practice of estimating the budget for an evaluation. The Alkin-Stecher (1983) study, one of the first attempts to identify typical allocation patterns within evaluation budgets, provided a natural starting point from which to launch our studies of evaluation budgeting. By comparing our study results with the Alkin and Stecher (1983) results, we hoped to find some common allocation patterns for evaluations, to provide guidelines for establishing accurate evaluation budgets, and to identify pitfalls particular to evaluation budgeting. In fact, a general evaluation budget pattern was observed and common factors affecting allocation patterns were identified.

We recognize that it is difficult, however, to know whether to attribute these patterns to true budget characteristics or to methodological artifacts. Certainly much has been written on the problem of combining data from independent studies in order to attain stronger conclusions (e.g., Glavin, 1984; Cook and Leviton, 1980; Pillemer and Light, 1980). This review, however, has not combined data, but rather compared it. Consequently, that similar patterns and effects have emerged <u>despite</u> methodological and population differences supports the notion of a common budgeting pattern, which may provide a useful starting point in a variety of evaluation contexts.

In terms of generalizations that could be useful in the practice of evaluation budgeting, the SEA estimates of budget allocations and the contracting firm evaluation budget figures both suggest that 61 percent of the budget might be a good guideline for estimating personnel costs. In order to accurately estimate personnel costs, of course, several factors should be considered before assigning a final budget figure. For example, total size of the budget should be considered. In a small evaluation, a higher proportion of the evaluation costs are going to be in the form of personnel expenses. Also, if the evaluation

employs a pre-post design or if considerable writing is required, up to 8 percent to 11 percent more money may need to be allocated to personnel. Even with this higher allocation, the contracting firm budgets often underestimated actual personnel costs by 6 percent.

These data also suggest that it is common to overestimate personnel costs for a formative evaluation. Both the SEA estimates and the contracting firm budgets allocated more money to personnel for a formative evaluation. However, the actual personnel costs for formative evaluations, according to the final cost of data for the contracting firm evaluations, was much less than anticipated. This overestimation of personnel needs, albeit not as serious as an underestimation, does not contribute to optimal use of evaluation funds.

While allocation to travel was also affected by a number of factors, it was accurately anticipated in the budgets and therefore did not constitute a pitfall for the evaluators. Of the factors that did affect the travel budget, the most obvious was the effect of the total budget size on travel allocations. A small evaluation budget simply could not accommodate the luxury of many on-site visits, particularly if out-of-state travel is required. Those factors related to increased allocation to travel were the conduct of a formative evaluation, the provision of additional evaluation-related services, and the use of archival data or mixed designs.

Allocating accurate amounts of the budget to data processing also did not present a difficulty to evaluators in that the amount budgeted was comparable to the amount spent at the end of the evaluation. Allocation to data processing, like travel, was somewhat related to the total budget size. If the evaluation project was small, then less money was available for data processing. If a summative evaluation was conducted, more money was allocated to data processing.

Finally, the total cost of an evaluation was related to a variety of study characteristics. Travel distance, the complexity of the evaluation design, the provision of evaluation-related services, and the content of the program being evaluated were all related to the total cost.

The results of this study are not earth-shattering. Rather, they provide a start on a useful guide for the development of evaluation budgets in a time when dwindling resources make budget accuracy very important. The guidelines provided in this paper should be considered as tentative, however, until more evidence can be collected. Future studies should attend to the many sources of budget data currently available in order to make comparisons between projected budget estimates and final evaluation expenditures, and to identify factors related to budgeting patterns. It is with these types of comparisons that we can discover evaluation budgeting pitfalls and remediate inaccurate budgeting procedures in evaluation.

REFERENCES

Alkin, M. C. & Stecher, B. (1983). A study of evaluation costs. In M. C. Alkin and L. C. Solman (Eds.), The costs of evaluation. Beverly Hills, CA: Sage Publications.

Cook, T. & Leviton, L. (1980). Reviewing the literature: A comparison of traditional methods with meta-analysis. Journal of Personality, 48, 449-472.

Hartman, W. T., Rivenburg, J. & Moore, W. (1984). Budget allocation patterns among school districts of varying fiscal constraint. Eugene, OR: University of Oregon, Center for Educational Policy and Management.

Levin, H. M. (1983). Cost-effectiveness: A primer. Beverly Hills, CA: Sage Publications.

Paisley, W., Blackwell, L., Emrick, J. A., Rittenhouse, D. H., & Cooper, M. D. (1978). Cost analysis of educational extension services. San Francisco: Far West Laboratory for Educational Research and Development.

Pillemer, D. & Light, R. (1980). Synthesizing outcomes: How to use research evidence from many studies. Harvard Educational Review, 50, 176-195.

Slavin, R. E. (1984). Meta-analysis in education: How has it been used? Educational Researcher, 13(8), 6-15.

Smith, N. L. & Smith, J. K. (in press). State level evaluation uses of cost analysis: A national descriptive study. In J. Catterall (Ed.), Economic analysis of public programs (New Directions in Program Evaluation). San Francisco: Jossey-Bass.

APPENDIX A: Cost Record Abstracting Form for Evaluation Contracting Firm Budgets

APPENDIX B: Report Abstracting Form for Evaluation Contracting Firm Budgets

APPENDIX C: SEA Evaluation Activity Checklist

APPENDIX A

Cost Record Abstracting Form

CATEGORY	CONTRACT TO DATE	TOTAL BUDGET	REMAINING BUDGET
1A Salaries			
1B Benefits			
2B Other			
PERSONNEL TOTAL			
2A CONSULTANT TOTAL			
3A Staff travel			
3C Other travel			
TRAVEL TOTAL			
3B CONSULTANT TRAVEL			
4 Postage and shipping			
5C Telephone			
COMMUNICATION TOTAL			
5A Facilities costs			
5D Utilities			
FACILITY TOTAL			
6A Printing			
6B Duplication			
DUPLICATION TOTAL			
7A DATA PROCESSING			
7B Subcontracts			
7C Conference expenses			
7D Other services			
OTHER SERVICE TOTAL			
8A Office supplies			
8B Printed materials			
8C Other supplies			
5B Equipment use			
SUPPLIES TOTAL			
TOTAL INDIRECT COSTS			
TOTAL			

BEST COPY AVAILABLE

APPENDIX B

Report Abstracting Form

VARIABLE NAME	CODE	COLUMN
Title: _____		
_____		
Report Code: _____		1-2
Principal investigator: _____		3-4
Client: _____		5-6
Content: _____		7-8
Program development: Yes = 1 No = 2		9
Evaluation related services: Yes = 1 No = 2		10
Conduct of evaluation: Yes = 1 No = 2		11
Focus 1: Process = 1 Outcome = 2		12
Purpose 1: Formative = 1 Summative = 2		13
Design: _____		14-15
_____		
_____		
Number of instruments developed: _____		16-17
Total number developed instruments that were administered _____		18-20
Number standardized instruments used: _____		21-22
Total number standardized instruments that were administered _____		23-25
Focus 2: Process = 1 Outcome = 2		26
Purpose 2: Formative = 1 Summative = 2		27
Design: _____		28-29
_____		
_____		
Number of instruments developed: _____		30-31
Total number developed instruments that were administered _____		32-34
Number standardized instruments used: _____		35-36
Total number standardized instruments that were administered _____		37-39
Other Research: _____		40-41
_____		
Number reports delivered _____		42
Total Number of report pages: _____		43-45

COPY AVAILABLE

APPENDIX C

Percentage of SEA evaluators indicating the element that would be a major part of a formative or a summative evaluation

Formative % (n)	Summative % (n)	Evaluation Element
96.6% (28)	69.0% (20)	Development of an evaluation plan
27.6% (8)	44.8% (13)	Use of an evaluation advisory panel
79.3% (23)	37.9% (11)	Development and piloting of instruments
27.6% (8)	58.6% (17)	Use of control or comparison groups
79.3% (23)	65.5% (19)	Collection of pre-test data
75.9% (22)	51.7% (15)	Collection of on-site observation data
75.9% (22)	65.5% (19)	Review and analysis of documents
69.0% (20)	51.7% (15)	Collection of personal interview data
17.2% (5)	31.0% (9)	Use of phone interviews
27.6% (8)	34.5% (10)	Collection of mail survey data
24.1% (7)	20.7% (6)	Use of community hearings
13.8% (4)	48.3% (14)	Use of expert reviews
62.1% (18)	93.1% (27)	Collection of post-test data
24.1% (7)	24.1% (7)	Development of case study reports
79.3% (23)	96.6% (28)	Statistical analysis of data

Appendix C continued

Formative % (n)	Summative % (n)	Element
72.4% (21)	65.5% (19)	Verbal presentation of study findings
93.1% (27)	93.1% (27)	Developement of narrative reports
75.9% (22)	55.2% (16)	Provision of consultation and followup asssistance to project staff